Washington State Department of Health

Endorsed by the Washington State Department of Health and the Washington State Medical Association

WSMA

Practice Guidance for JUDICIOUS USE OF ANTIBIOTICS

ACUTE UNCOMPLICATED SINUSITIS

"Approximately 2/3 of sinus infections resolve without antibiotics."[1,19]

DIAGNOSIS OF ACUTE SINUSITIS IN THE IMMUNOCOMPETENT PATIENT:

Pediatric:
- Persistent nasal discharge[2]
- Daytime cough[3]
- Not improving at 10-14 days

Adult:[4]
- Purulent nasal discharge
- Maxillary pain (esp. unilateral)
- Unilateral sinus tenderness
- Worsening after initial improvement
- Not improving at 7-10 days

Sinus radiography should not be used in routine cases to diagnose acute rhinosinusitis.[6,7]

PATIENT PRESENTS WITH ACUTE SEVERE SINUSITIS:

Pediatric and Adult,
Acute Severe (Uncommon):[5]
- High (>39°C) or persistent fever (> 3-4 days)
- Periorbital swelling
- Severe facial/dental pain
- These symptoms need immediate attention, regardless of duration.

< 7-14 days duration (or longer if improving) OR symptoms are mild**

Symptomatic Treatment:
Saline irrigation, analgesics/antipyretics, topical and/or oral decongestants, moisture. (Antibiotics do not effectively treat URI or prevent bacterial sinusitis.)
Call practitioner if symptoms do not improve after 4-5 days of additional treatment

Moderate to severe symptoms, persistent mucopurulent discharge and/or daytime cough, without improvement for 7-10 days (in adults) or 10-14 days (in children) or longer

Are any of these Risk Factors present: Under 2 yrs old, In daycare, Antibiotics in past 3 months or Recurrent infections

NO

NO RISK FACTORS PRESENT (CHOOSE ONE):
- **Amoxicillin:** Adults: 1500 mg/day in 2 or 3 divided doses;[9] Children: 45mg/kg/day in 2 or 3 div. doses
- **True Penicillin allergy:*** Trimethoprim-sulfa or Clarithomycin

Continue 7 days beyond substantial improvement.

YES

RISK FACTORS PRESENT (CHOOSE ONE):
- **Amoxicillin:** Adults: 3 Gm/day, in 2 or 3 divided doses; Children: 90 mg/kg/day, in 2 or 3 divided doses[10]
- **True Penicillin Allergy:*** Cefuroxime, Cefdinir or Cefpodoxime and/or allergy consult

Improvement after 48-72 hours? Persistence of drainage alone is not indication for change of Rx.

NO

- **Amoxicillin:** Adults: 3 Gm/day + Clavulanate 6.4 mg/kg/day,** in 2 or 3 divided doses
  Children: 90mg/kg/day plus Clavulanate 6.4 mg/kg/day,** in 2 or 3 div. doses,[10]
- **OR: Cefuroxime or Cefdinir or Cefpodoxime**
- **For True Penicillin allergy:*** Consider Antipneumococcal fluoroquinolone in patients > 18 years old

Continue 7 days beyond substantial improvement.
If no improvement, consider referral and/or sinus imaging.

NOTES:

* True Penicillin Allergy: history of urticaria or anaphylaxis to a penicillin are indicative of true allergy. Morbiliform and maculopapular rashes are not indicative of true allergy.
If history of penicillin anaphylaxis, consult an allergist before prescribing a cephalosporin, or consider antipneumococcal fluoroquinolone as last choice if > 18 yrs old.

** This dose ratio may not be available as a fixed combination. Clavulanate dose should not exceed 10 mg/kg/day. Using 2 products (e.g., amoxicillin 500 mg + Augmentin 500 mg) may be necessary to achieve the desired ratio.

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WHEN BACTERIAL INFECTION IS PRESENT

Streptococcus pneumoniae	30-66%
Hemophilus influenzae	20%
Moraxella catarrhalis	10%

KEY POINTS

- Three meta-analyses have shown that newer and broad-spectrum antibiotics are not significantly better than narrow-spectrum agents.[9]
- However recent emergence of resistant bacteria must be kept in mind.[4]
- Most viral rhinosinusitis is well or nearly well at 7-10 days; about 25% are still symptomatic at 14 days.[8]
- Color and type of nasal discharge do not predict bacterial infection.[11]
- Bacterial infection is uncommon when symptom duration is less than seven days, unless patient is acutely ill.
- Imaging should be considered only when sinusitis is recurrent, complications are suspected, diagnosis is unclear, or surgery is being considered.

PREVENTION:[8]

- Vaccination:
  All newborns and children < 2 yrs should receive Prevnar.[9,10]
  Children with recurrent infections should receive
  Influenza vaccine if > 6 mo
  23-valent Pneumococcal vaccine if > 2 yrs[11]
- Cigarette smoke avoidance/cessation
- Consider allergen and irritant avoidance

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